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EXAMINER

TEIXEIRA MOFFAT, JONATHAN CHARLES

ART UNIT

PAPER NUMBER

2863

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/766,472	Applicant(s) YOSHINAGA ET AL.	
	Examiner JONATHAN TEIXEIRA MOFFAT	Art Unit 2863	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 05 September 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1 and 3-8 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1 and 3-8 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION***Response to Amendment***

In response to applicant's Request for Continued Examination, filed 9/5/2008, the proposed amendments filed 3/20/2008, are accepted and will be entered at this time. Applicant has added new claims 5-8 and amended claims 1 and 4 such as to alter the scope of the claimed subject matter. Upon further review, the examiner believes that these features are supported by the specification as originally filed.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

1.

Claims 1, and 4-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Riedel (US pat 5870698) in view of Tuszynski (US pat pub 20030176938), Katsuta (JP 2001145947) and Sasaki (US pat pub 20040148136).

With respect to claim 1, Riedel discloses a stand-alone (column 2 lines 39-43) apparatus comprising:

1) An input unit configured to receive an input including a state of an operating quality for a change in the operating condition (Fig 2 items 102 and 114).

2) A storage process unit configured to store information including history data including one or more of product data, mold numbers, resin material data or product molding conditions (Fig 5 items 432, 446 and 418 and column 2 lines 56-63) the history data indicative of the

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change in the operating condition and the state of the operating quality corresponding to the change (column 7 line 56 – column 8 line 30).

3) A display unit configured to display data (Fig 1 item 24) including the history data and the state of the operating quality (column 2 lines 56-63).

3) A display unit configured to display data (Fig 1 item 24) that includes the history data and product identification data and the state of the operating quality stored by the storage process unit and monitoring data representing the operating condition for the injection molding machine (column 2 lines 56-63).

With respect to claim 4, Riedel discloses a stand-alone (column 2 lines 39-43) apparatus comprising:

1) A communication unit configured to communicate with a display device of an injection molding machine (Fig 3) operated in accordance with an operating condition through a communication medium (Fig 4 item 208).

2) A unit configured to receive data including history data including one or more of product data, mold numbers, resin material data or product molding conditions (Fig 5 items 432, 446 and 418 and column 2 lines 56-63) the history data indicative of a change in the operating condition and a state of an operating quality corresponding to the change in the operating condition from the display device using the communication unit (Fig 4 item 208).

3) A storage unit configured to store the history data (Fig 4 item 210).

4) Wherein the display unit (Fig 1 item 24) is configured to display data including the history data and the state of the operating quality resulting from the change in the operating condition (Fig 4 item 208 column 2 lines 56-63).

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With respect to claim 5, Riedel discloses an apparatus comprising:

1) An input unit, coupled to the display device, configured to receive an input from a user mad from the injection molding machine (Fig 2 items 102, 114 and 122 and Fig 3 items 122 and 210).

2) A screen controller including a storage process unit, the screen controller configured to receive a display request from the input unit and configured to create a display image based on data stored in storage modules (Fig 3 items 122 and 210, these are displays and therefore have screen controllers displaying data which was stored).

3) The storage process unit configured to receive and store data including one or more of changed molding conditions of the injection molding machine, molding qualities, and product identification data indicative of a product molded by the injection molding machine in accordance with the changed molding conditions and history data including one or more of product data, mold numbers, resin material data, to the second storage module (Fig 5 items 432, 446 and 418 and column 2 lines 56-63).

4) Wherein the display device is configured to display the image and is configured to allow the user to control and operate the injection molding machine by the input unit (Fig 3 and Fig 4 item 208 column 2 lines 56-63).

With respect to claim 6, Riedel discloses that the display device further includes a communication module configured to communicate through a communications medium to a remote communication terminal, the remote communication terminal including a collection unit, a collection storage unit, and a display unit; the collection unit configured to initiate communication with the display device and transfer the data stored in the storage module and

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store the transferred data into the collection storage unit, the display unit configured to display the data stored in the collection storage unit (Fig 3 items 208 or “RS485 Network”).

With respect to claim 7, Riedel discloses that the first and the second storage module are configured to be in the same storage module (Fig 1).

With respect to claim 8, Riedel discloses an apparatus comprising:

1) A display device of an injection molding machine (Fig 1 item 24 and Fig 2 item 122 and Fig 3 items 122 and 210), the display device configured to display a display image in a display area, configured to allow the user to control and operate the injection molding machine and to display data stored in a storage module, where in the storage module is configured to store data including one or more of changed molding conditions of the injection molding machine, molding qualities, and product identification data indicative of a product molded by the injection molding machine in accordance with the changed molding conditions and history data including one or more of product data, mold numbers, resin material data (Abstract, Fig 3 and Fig 4 item 208 and Fig 5 items 432, 446 and 418 and column 2 lines 56-63 and column 2 lines 56-63).

2) A communication module (Fig 3 items 208) configured to communicate through a communications medium; and a remote communication terminal configured to communicate with the display device through the communications medium, the remote communication terminal including a collection unit, a collection storage unit, and a display unit; the collection unit configured to initiate communication with the display device and transfer the data stored in the storage module and store the transferred data into the collection storage unit, the display unit configured to display the data stored in the collection storage unit (Fig 3 item 210).

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With respect to claims 1, 4-5 and 8, Riedel fails to disclose that the storage process unit records data indicative of product identification data indicating a product produced by the injection molding machine, in accordance with the change in the operating condition and the history data corresponding to the product identification data.

With respect to claims 1, 4-5 and 8, Riedel further fails to disclose a display unit configured to simultaneously display a first display area and a second display area in the display unit.

Tuszynski teaches, with respect to claims 1, 4-5 and 8, that the storage process unit records data indicative of product identification data indicating a product produced by the injection molding machine (paragraphs 0111 and 0166), in accordance with the change in the operating condition and the history data corresponding to the product identification data (paragraphs 0006, 0164 and 0166).

It would have been obvious to one of ordinary skill in the art at the time of applicant's invention to modify the apparatus of Riedel by correlating deviations in injection processes to the products produced as taught by Tuszynski. Riedel discloses independent configuration data for each mold type (column 2 lines 56-67 and column 8 lines 42-57) indicating the desire to control the molding process properties according to the item to be produced. Further, Riedel discloses storing history data including errors (changes and deviations from desired values) (column 7 line 57 - column 8 line 30). In reviewing these references together, one of ordinary skill in the art would understand that the properties and quality of the molded item are impacted by the properties and measured performance parameters of the injection molding process. One of

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ordinary skill in the art would find it both obvious and desirable to identify which specific items were produced under which conditions as a way to effect quality control over these items.

Katsuta teaches, with respect to claims 1 and 4-5, a display unit configured to simultaneously display a first display area and a second display area in the display unit (abstract).

It would have been obvious to one of ordinary skill in the art to modify the method of Riedel by allowing the user display interfaces to display two or more screens pertaining to different pertinent data as taught by Katsuta. Riedel indicates the desire to display more than one set of information simultaneously (column 8 lines 23-30). Katsuta discloses, in the above cited portion, that a multi-display will impart the benefit of relaying information without complicating the interface. Sasaki, also discloses the simultaneous display of history data, product ID data, state of operating condition change data, and monitoring data (Fig 24 and paragraphs 0268-0272). One of ordinary skill in the art, seeing that the display of more than one sort of information at the same time is common to the art of injection molding machine monitoring and control for the benefit of relaying as much information to a controller as possible, would find it obvious to enact these techniques in the similar endeavor of Riedel and would understand that it requires no more than routine skill in the art.

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2.

Claims 1 and 3-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wang (US pat 5461570) in view of Tuszynski (US pat pub 20030176938) , Katsuta (JP 2001145947) and Sasaki (US pat pub 20040148136).

With respect to claim 1, Wang discloses an apparatus comprising:

1) An input unit configured to receive an input including a state of an operating quality for a change in the operating condition (Fig 1 items 11-20 and 22).

2) A storage process unit configured to store information including history data including one or more of product data, mold numbers, resin material data or product molding conditions (Figs 4b and 5b and column 2 lines 7-14 and lines 25-42) the history data indicative of the change in the operating condition and the state of the operating quality corresponding to the change (Fig 1 storage in item 100 and Figs 4b, 11, 13a-13b, 14-16a).

3) A display unit configured to display data (Fig 1 items 404 and 405) including the history data and the state of the operating quality (Figs 4b and 5b).

With respect to claim 3, Wang discloses that the history data and the product identification data are used for assisted software for assisting an operating condition setting operation (Figs 13a-b items 660 660' and figs 14-16b).

With respect to claim 4, Wang discloses an apparatus comprising:

1) A communication unit configured to communicate with a display device of an injection molding machine (Fig 20 and column 8 lines 55-67) operated in accordance with an operating condition through a communication medium (Fig 1 item 99).

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2) A unit configured to receive data including history data including one or more of product data, mold numbers, resin material data or product molding conditions (Figs 4b and 5b and column 2 liens 7-14 and lines 25-42) the history data indicative of a change in the operating condition and a state of an operating quality corresponding to the change in the operating condition from the display device using the communication unit (Figs 1, 6 and column 8 lines 8-35). Specifically the supervisory subcomponents that request and collect data from other subcomponents.

3) A storage unit configured to store the history data (storage icon in the supervisor node Fig 1).

4) Wherein the display unit (Fig 20 and column 8 lines 55-67) is configured to display data including the history data and the state of the operating quality resulting from the change in the operating condition (Figs 4b and 5b and column 2 liens 7-14 and lines 25-42).

With respect to claim 5, Wang discloses an apparatus comprising:

1) An input unit, coupled to the display device, configured to receive an input from a user mad from the injection molding machine (Fig 1 items 11-20 and 22).

2) A screen controller including a storage process unit, the screen controller configured to receive a display request from the input unit and configured to create a display image based on data stored in storage modules (Fig 1 items 404 and 405).

3) The storage process unit configured to receive and store data including one or more of changed molding conditions of the injection molding machine, molding qualities, and product identification data indicative of a product molded by the injection molding machine in accordance with the changed molding conditions and history data including one or more of

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product data, mold numbers, resin material data, to the second storage module (Fig 1 and Figs 4b and 5b and Fig 6 and column 2 lines 7-14 and lines 25-42 and column 8 lines 8-35).

4) Wherein the display device is configured to display the image and is configured to allow the user to control and operate the injection molding machine by the input unit (Figs 1, 6 and column 8 lines 8-35). Specifically the supervisory subcomponents that request and collect data from other subcomponents.

With respect to claim 6, Wang discloses that the display device further includes a communication module configured to communicate through a communications medium to a remote communication terminal, the remote communication terminal including a collection unit, a collection storage unit, and a display unit; the collection unit configured to initiate communication with the display device and transfer the data stored in the storage module and store the transferred data into the collection storage unit, the display unit configured to display the data stored in the collection storage unit (Fig 1 item 99).

With respect to claim 7, Wang discloses that the first and the second storage module are configured to be in the same storage module (Fig 1 item 500 “200 MB”).

With respect to claim 8, Wang discloses an apparatus comprising:

1) A display device of an injection molding machine (Fig 1 items 404 and 405), the display device configured to display a display image in a display area, configured to allow the user to control and operate the injection molding machine and to display data stored in a storage module, where in the storage module is configured to store data including one or more of changed molding conditions of the injection molding machine, molding qualities, and product identification data indicative of a product molded by the injection molding machine in

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accordance with the changed molding conditions and history data including one or more of product data, mold numbers, resin material data (Fig 1 and Figs 4b and 5b and Fig 6 and column 2 lines 7-14 and lines 25-42 and column 8 lines 8-35).

2) A communication module (Fig 1 item 99) configured to communicate through a communications medium; and a remote communication terminal configured to communicate with the display device through the communications medium, the remote communication terminal including a collection unit, a collection storage unit, and a display unit, the collection unit configured to initiate communication with the display device and transfer the data stored in the storage module and store the transferred data into the collection storage unit, the display unit configured to display the data stored in the collection storage unit (Fig 1 and Figs 3a-4a).

With respect to claims 1, 4-5 and 8, Wang fails to disclose that the storage process unit records data indicative of product identification data indicating a product produced by the injection molding machine, in accordance with the change in the operating condition and the history data corresponding to the product identification data.

With respect to claims 1, 4-5 and 8, Wang further fails to disclose a display unit configured to simultaneously display a first display area and a second display area in the display unit.

Tuszynski teaches, with respect to claims 1, 4-5 and 8, that the storage process unit records data indicative of product identification data indicating a product produced by the injection molding machine (paragraphs 0111 and 0166), in accordance with the change in the operating condition and the history data corresponding to the product identification data (paragraphs 0006, 0164 and 0166).

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It would have been obvious to one of ordinary skill in the art at the time of applicant's invention to modify the apparatus of Wang by correlating deviations in injection processes to the products produced as taught by Tuszynski. Wang discloses independent configuration data for each mold type (Fig 5b) and measured quality data for each molded item (Fig 4b) indicating the desire to control the molding process properties according to the item to be produced. Further, Wang discloses storing history data including defects in each molded item (Fig 4b). In reviewing these references together, one of ordinary skill in the art would understand that the properties and quality of the molded item are impacted by the properties and measured performance parameters of the injection molding process. One of ordinary skill in the art would find it both obvious and desirable to identify which specific items were produced under which conditions as a way to effect quality control over these items.

Katsuta teaches, with respect to claims 1, 4-5 and 8, a display unit configured to simultaneously display a first display area and a second display area in the display unit (abstract).

It would have been obvious to one of ordinary skill in the art to modify the method of Wang by allowing the user display interfaces to display two or more screens pertaining to different pertinent data as taught by Katsuta. Katsuta discloses, in the above cited portion, that a multi-display will impart the benefit of relaying information without complicating the interface. Sasaki, also discloses the simultaneous display of history data, product ID data, state of operating condition change data, and monitoring data (Fig 24 and paragraphs 0268-0272). One of ordinary skill in the art, seeing that the display of more than one sort of information at the same time is common to the art of injection molding machine monitoring and control for the benefit of relaying as much information to a controller as possible, would find it obvious to enact these

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techniques in the similar endeavor of Wang and would understand that it requires no more than routine skill in the art.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JONATHAN TEIXEIRA MOFFAT whose telephone number is (571)272-2255. The examiner can normally be reached on Mon-Fri, from 7:00-4:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Barlow can be reached on (571) 272-2269. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/jtm/
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9/11/2008

/Bryan Bui/
Primary Examiner, Art Unit 2863